

## SEQUENCE LISTING

## (1) GENERAL INFORMATION

- 5 (i) APPLICANT: Bournsnel, Michael E.G.  
Inglis, Stephen C.
- (ii) TITLE OF INVENTION: Viral Preparations, Vectors,  
Immunogens, and Vaccines
- 10 (iii) NUMBER OF SEQUENCES: 25
- (iv) CORRESPONDENCE ADDRESS:  
15 (A) ADDRESSE: Flehr, Hohbach, Test, Albritton & Herbert  
(B) STREET: 4 Embarcadero Center, Suite 3400  
(C) CITY: San Francisco  
(D) STATE: CA  
(E) COUNTRY: USA  
20 (F) ZIP: 94111-4187
- (v) COMPUTER READABLE FORM:  
(A) MEDIUM TYPE: Floppy disk  
(B) COMPUTER: IBM PC compatible  
(C) OPERATING SYSTEM: PC-DOS/MS-DOS  
25 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
- (vi) CURRENT APPLICATION DATA  
(A) PPLICATION NUMBER: 08/604,165  
30 (B) FILING DATE: 21-FEB-1996
- (vi) PRIOR APPLICATION DATA:  
(A) APPLICATION NUMBER: GB 9503395.7  
(B) FILING DATE: 21-FEB-1995
- 35 (vi) PRIOR APPLICATION DATA:  
(A) APPLICATION NUMBER: GB 9515557.8  
(B) FILING DATE: 28-JUL-1995
- (vi) PRIOR APPLICATION DATA:  
40 (A) APPLICATION NUMBER: GB 9603322.0  
(B) FILING DATE: 16-FEB-1996
- (vii) ATTORNEY/AGENT INFORMATION:  
45 (A) NAME: Linda R. Judge  
(B) REGISTRATION NO: 42,702  
(C) REFERENCE/DOCKET NUMBER: A-63282/WHD/LRJ
- (viii) TELECOMMUNICATION INFORMATION:  
50 (A) TELEPHONE: (415) 871-1989  
(B) TELEFAX: (415) 949-8711
- (2) INFORMATION FOR SEQ ID NO: 1:  
(i) SEQUENCE CHARACTERISTICS:  
55 (A) LENGTH: 17 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear  
(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

AGCTTAGTAC TGACGAC

17

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(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

CATGGTCGTC AGTACTA

17

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(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

GTGGAGACGC GAATAATCGC GAGC

24

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(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 32 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

GGCCGCTCGC GATTATTCGC GTCTCCACAA AA

32

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(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 25 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

TCGAAGCTTC AGGGAGTGGC GCAGC

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## (2) INFORMATION FOR SEQ ID NO: 6:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 30 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

TCAGTTAACG GACAGCATGG CCAGGTCAAG

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## (2) INFORMATION FOR SEQ ID NO: 7:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

TCAGTTAACG CCTCTGTTCC TTTCCCTTC

29

## (2) INFORMATION FOR SEQ ID NO: 8:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 30 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

TCAGAATTCG AGCAGCTCCT CATGTTTCGAC

30

## (2) INFORMATION FOR SEQ ID NO: 9:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

TCAGTTAACG CCTCTGTTCC TTTCCCTTC

29

## (2) INFORMATION FOR SEQ ID NO: 10:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO  
 (iii) ANTI-SENSE: NO  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

5 TCAGAATTCG TTCCGGGAGC AGGCGTGGA 29

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 30 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO  
 15 (iii) ANTI-SENSE: NO  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

TCAAAGCTTA TGGCTTCTCA CGCCGGCCAA 30

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(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 35 base pairs  
 25 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO  
 (iii) ANTI-SENSE: NO  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

30 TCAGTTAACT GCACTAGTTT TAATTAATAC GTATG 35

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 40 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO  
 40 (iii) ANTI-SENSE: NO  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

45 TGGATGACAT GCCTGTCACA TTGAATGAAG AGGTAGAAGT 40

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 36 base pairs  
 50 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO  
 (iii) ANTI-SENSE: NO  
 55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

GGCCGCTCGA ACATGGCCCA CGAGAGAAAG GCTAAG 36

## (2) INFORMATION FOR SEQ ID NO: 15:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

GACCTTAGCC TTTCTCTCGT GGGCCATGTT CGAGC

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## (2) INFORMATION FOR SEQ ID NO: 16:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 170 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

TTAATACGAC TCACTATAGG GAGACCGGAA GCTTGGTACC GAGCTCGGAT CCACTAGTAA 60

CGGCCGCCAG TGTGCTGGAA TTCTGCAGAT ATCCATCACA CTGGCGGCCG CTCGAGCATG 20

CATCTAGCCT TTGACTACA ATGGCCCACG AGAGAAAGGC TAAGGTCCTG 70

## (2) INFORMATION FOR SEQ ID NO: 17:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 147 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

TTAATACGAC TCACTATAGG GAGACCGGAA GCTTGGTACC GAGCTCGGAT CCACTAGTAA 60

CGGCCGCCAG TGTGCTGGAA TTCTGCAGAT ATCCATCACA CTGGCGGCCG CTCGAACATG 120

GCCCACGAGA GAAAGGCTAA GGTCTCTG 147

## (2) INFORMATION FOR SEQ ID NO: 18:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

TCGAAGCTTC AGGGAGTGGC GCAGC

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## (2) INFORMATION FOR SEQ ID NO: 19:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

TCAGTTAACG GCCAGCATAG CCAGGTCAAG

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## 15 (2) INFORMATION FOR SEQ ID NO: 20:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

25 TCAGTTAACA GCCCCTCTTT GCTTCCCTC

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## (2) INFORMATION FOR SEQ ID NO: 21:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

TCAGAATTCG AGCAGCTCCT CATGTTGCAC

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## (2) INFORMATION FOR SEQ ID NO: 22:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

50

TCAAAGCTTA TGGCTTCGTA CCCCTGCCAT

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## (2) INFORMATION FOR SEQ ID NO: 23:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

- (D) TOPOLOGY: linear
- (iii) HYPOTHETICAL: NO
- (iii) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

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TCAGTTAACG GACCCCGTCC CTAACCCACG

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## (2) INFORMATION FOR SEQ ID NO: 24:

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- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

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- (iii) HYPOTHETICAL: NO
- (iii) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

TCAGTTAACA GCCCCTCTTT GCTTCCCTC

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## (2) INFORMATION FOR SEQ ID NO: 25:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

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- (iii) HYPOTHETICAL: NO
- (iii) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

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TCAGAATTCG AGCAGCTCCT CATGTTGCAC

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